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## DECLARATION FOR PATENT APPLICATION

page 1 of 2

As a below named inventor, I hereby declare that my residence, post office address and citizenship are as stated below my name and that I believe that I am the original, first and sole inventor (if only one inventor is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled: Joint Timing Recovery for Multiple Signal Antennas, the specification of which (check one)

is attached hereto or  
 was filed on 06/27/03 as Application Serial No. 10/608679 and  
 was amended on \_\_\_\_\_ (if applicable).

I hereby claim benefit under Title 35, United States Code, Section 119 of any United States provisional application(s) listed below:

(Application Serial No.) (Filing Date)

(Application Serial No.) (Filing Date)

I hereby claim foreign priority benefits under Title 35, United States Code, Section 119 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate have a filing date before that of the application on which priority is claimed:

## Prior Foreign Application(s)

Priority Claimed

(Number)	(Country)	(Day/Month/Year Filed)	<input type="checkbox"/> Yes <input type="checkbox"/> No
(Number)	(Country)	(Day/Month/Year Filed)	<input type="checkbox"/> Yes <input type="checkbox"/> No

I hereby claim benefit under Title 35, United States Code, Section 120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, Section 112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulation, 1.56(a) which occurred between the filing date of the prior application and the national or PCT international filing date of this application:

(Application Serial No.)	(Filing Date)	Status:	<input type="checkbox"/> Patented <input type="checkbox"/> Pending <input type="checkbox"/> Abandoned
(Application Serial No.)	(Filing Date)	Status:	<input type="checkbox"/> Patented <input type="checkbox"/> Pending <input type="checkbox"/> Abandoned

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## DECLARATION FOR PATENT APPLICATION

page 2 of 2

I hereby state that I have reviewed and I understand the contents of the above-identified specification, including the claims, as amended by any amendments referred to above.

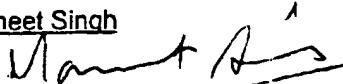
I hereby appoint the following patent agent to prosecute this application and to transact all business concerning the application in the United States Patent and Trademark Office:

David R. Gildea, Reg. No. 38,465  
Menlo Patent Agency LLC  
435 Hermosa Way  
Menlo Park, CA 94025

I acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, Section 1.56(a).

I hereby declare that all statements made herein of my own knowledge are true, that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Name of Inventor: Manoneet Singh

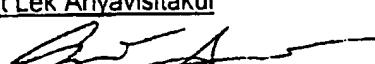
Signature of Inventor:  Date: 10/1/03

Residence: Sunnyvale, California

Citizen of: India

Post Office Address: 655 S. Fair Oaks Ave., K-301, Sunnyvale, California 94086

Name of Inventor: Sirikit Lek Ariyavitsakul

Signature of Inventor:  Date: 10/1/03

Residence: Alpharetta, Georgia

Citizen of: United States of America

Post Office Address: 875 Mount Katahdin Trail, Alpharetta, Georgia 30022-7104

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Form PTO-1595 (Rev. 03/01) OMB No. 0651-0027 (exp. 5/31/2002)		RECORDATION FORM COVER SHEET <b>PATENTS ONLY</b>		U.S. DEPARTMENT OF COMMERCE U.S. Patent and Trademark Office	
Tab settings → → → ↓ ↓ ↓ ↓ ↓ ↓					
To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof.					
1. Name of conveying party(ies): Manoneet Singh Sirikit Lek Ariyavitsakul		2. Name and address of receiving party(ies) Name: <u>Texas Instruments Incorporated</u> Internal Address: _____ _____ _____			
Additional name(s) of conveying party(ies) attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Street Address: <u>12500 TI Boulevard</u> _____ _____			
3. Nature of conveyance: <input checked="" type="checkbox"/> Assignment <input type="checkbox"/> Merger <input type="checkbox"/> Security Agreement <input type="checkbox"/> Change of Name <input type="checkbox"/> Other _____		City: <u>Dallas</u> State: <u>TX</u> Zip: <u>75243</u>			
Execution Date: <u>10/01/2003</u>		Additional name(s) & address(es) attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
4. Application number(s) or patent number(s): If this document is being filed together with a new application, the execution date of the application is: _____					
A. Patent Application No.(s) <u>10/608679</u>		B. Patent No.(s)			
Additional numbers attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No					
5. Name and address of party to whom correspondence concerning document should be mailed: Name: <u>David R. Gildea</u> Internal Address: <u>Menlo Patent Agency LLC</u> _____ _____		6. Total number of applications and patents involved: <input checked="" type="checkbox"/> 1			
Street Address: <u>435 Hermosa Way</u> _____		7. Total fee (37 CFR 3.41).....\$ <u>40</u>			
City: <u>Menlo Park</u> State: <u>CA</u> Zip: <u>94025</u>		<input checked="" type="checkbox"/> Enclosed <input checked="" type="checkbox"/> Authorized to be charged to deposit account			
8. Deposit account number: <u>071248</u> _____ (Attach duplicate copy of this page if paying by deposit account)					
DO NOT USE THIS SPACE					
9. Statement and signature. <i>To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.</i>					
David R. Gildea <hr/> Name of Person Signing		<u>David R. Gildea</u> Signature		<u>10/03/2003</u> Date	
Total number of pages including cover sheet, attachments, and documents: <u>3</u>					

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Form PTO-1595 (Rev. 03/01) OMB No. 0651-0027 (exp. 5/31/2002)		RECORDATION FORM COVER SHEET <b>PATENTS ONLY</b>		U.S. DEPARTMENT OF COMMERCE U.S. Patent and Trademark Office	
Tab settings → → → ↓ ↓ ↓ ↓ ↓ ↓					
To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof.					
1. Name of conveying party(ies):  Manoneet Singh Sirikit Lek Ariyavitsakul		2. Name and address of receiving party(ies)  Name: <u>Texas Instruments Incorporated</u>  Internal Address: _____ _____			
Additional name(s) of conveying party(ies) attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No					
3. Nature of conveyance:  <input checked="" type="checkbox"/> Assignment <input type="checkbox"/> Merger  <input type="checkbox"/> Security Agreement <input type="checkbox"/> Change of Name  <input type="checkbox"/> Other _____		Street Address: <u>12500 TI Boulevard</u> _____		City: <u>Dallas</u> State: <u>TX</u> Zip: <u>75243</u>	
Execution Date: <u>10/01/2003</u>				Additional name(s) & address(es) attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
4. Application number(s) or patent number(s):  If this document is being filed together with a new application, the execution date of the application is: _____					
A. Patent Application No.(s)  <u>10/608679</u>		B. Patent No.(s)			
Additional numbers attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No					
5. Name and address of party to whom correspondence concerning document should be mailed:  Name: <u>David R. Gildea</u> Internal Address: <u>Menlo Patent Agency LLC</u> _____		6. Total number of applications and patents involved: <input checked="" type="checkbox"/>			
Street Address: <u>435 Hermosa Way</u> _____		7. Total fee (37 CFR 3.41). .... \$ <u>40</u>			
City: <u>Menlo Park</u> State: <u>CA</u> Zip: <u>94025</u>		<input checked="" type="checkbox"/> Enclosed  <input checked="" type="checkbox"/> Authorized to be charged to deposit account			
8. Deposit account number:  <u>071248</u>					
(Attach duplicate copy of this page if paying by deposit account)					
DO NOT USE THIS SPACE					
9. Statement and signature.  To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document. _____ David R. Gildea					
Name of Person Signing		Signature		Date	
Total number of pages including cover sheet, attachments, and documents: <u>3</u>					
Mail documents to be recorded with required cover sheet information to: Commissioner of Patents & Trademarks, Box Assignments Washington, D.C. 20231					

Total number of pages including cover sheet, attachments, and documents: 3Mail documents to be recorded with required cover sheet information to:  
Commissioner of Patents & Trademarks, Box Assignments  
Washington, D.C. 20231

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## ASSIGNMENT OF PATENT APPLICATION

WHEREAS, Sirikiat Lek Ariyavasitakul of 875 Mount Katahdin Trail, Alpharetta, Georgia 30022-7104, hereafter referred to as "Assignor", has invented certain new and useful inventions as described and set forth in the below identified application for the United States Letter Patent entitled:

Joint Timing Recovery for Multiple Signal Antennas

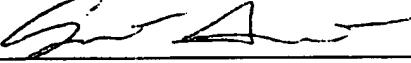
filed herewith; or  
 Serial No. 10/608679 filed on 06/27/03;

WHEREAS, Texas Instruments Incorporated of 12500 TI Boulevard, Dallas, Texas 75243, hereinafter referred to as "Assignee", is desirous of acquiring an interest in the invention and application and in any Letters Patent which may be granted on the same;

FOR good and valuable consideration, receipt of which is hereby acknowledged by Assignor, Assignor has assigned, and by these presents does assign all right, title and interest in and to the invention and application, all foreign counterparts (including patent, utility model and industrial designs), and all future improvements theron, and in and to any Letters Patent and Registrations which may hereafter be granted on the same in the United States and all countries throughout the world. The right, title and interest is to be held and enjoyed by Assignee and Assignee's successors and assigns as fully and exclusively as it would have been and enjoyed by Assignor had this assignment not been made, for the full term of any Letters Patent and Registrations which may be granted thereon, or any division, renewal, continuation in whole or in part, substitution, conversion, reissue, prolongation or extension thereof.

Assignor further agrees that he will, without charge to the Assignee, but at the Assignee's expense, (a) cooperate with Assignee in the prosecution of the U. S. patent application and foreign counterparts on the invention and any improvements, (b) execute, verify, acknowledge and deliver all such further papers, including patent applications and instruments of transfer, and (c) perform such acts as Assignee lawfully may request to obtain or maintain Letters Patent and Registrations for the invention and improvements in any and all countries, and to vest title thereto in Assignee, or Assignee's successors and assigns.

IN TESTIMONY WHEREOF, Assignor hereunto signs.

  
signature of Sirikiat Lek Ariyavasitakul

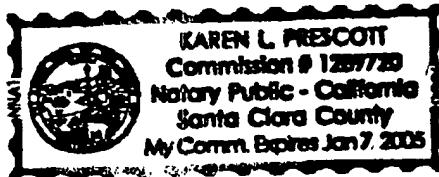
10/1/2003  
date

In the county of Santa Clara, state of California,

before me this date October 1, 2003 personally appeared Sirikiat Lek Ariyavasitakul who is  personally known to me or  proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he/she executed the same in his/her authorized capacity, and that by his/her signature on the instrument the person or the entity upon behalf of which the person acted executed the document.

Notary Stamp/Seal

  
Karen L. Prescott  
Notary Public



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## ASSIGNMENT OF PATENT APPLICATION

WHEREAS, Manoneet Singh of 655 S. Fair Oaks Ave., K-301, Sunnyvale, California 94086, hereafter referred to as "Assignor", has invented certain new and useful inventions as described and set forth in the below identified application for the United States Letter Patent entitled:

Joint Timing Recovery for Multiple Signal Antennas

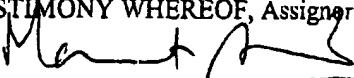
filed herewith; or  
 Serial No. 10/608679 filed on 06/27/03;

WHEREAS, Texas Instruments Incorporated of 12500 TI Boulevard, Dallas, Texas 75243, hereinafter referred to as "Assignee", is desirous of acquiring an interest in the invention and application and in any Letters Patent which may be granted on the same;

FOR good and valuable consideration, receipt of which is hereby acknowledged by Assignor, Assignor has assigned, and by these presents does assign all right, title and interest in and to the invention and application, all foreign counterparts (including patent, utility model and industrial designs), and all future improvements thereon, and in and to any Letters Patent and Registrations which may hereafter be granted on the same in the United States and all countries throughout the world. The right, title and interest is to be held and enjoyed by Assignee and Assignee's successors and assigns as fully and exclusively as it would have been and enjoyed by Assignor had this assignment not been made, for the full term of any Letters Patent and Registrations which may be granted thereon, or any division, renewal, continuation in whole or in part, substitution, conversion, reissue, prolongation or extension thereof.

Assignor further agrees that he will, without charge to the Assignee, but at the Assignee's expense, (a) cooperate with Assignee in the prosecution of the U. S. patent application and foreign counterparts on the invention and any improvements, (b) execute, verify, acknowledge and deliver all such further papers, including patent applications and instruments of transfer, and (c) perform such acts as Assignee lawfully may request to obtain or maintain Letters Patent and Registrations for the invention and improvements in any and all countries, and to vest title thereto in Assignee, or Assignee's successors and assigns.

IN TESTIMONY WHEREOF, Assignor hereunto signs.

  
signature of Manoneet Singh

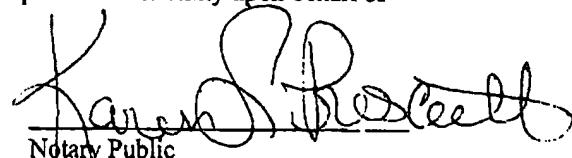
date

10/1/03

In the county of Santa Clara, state of California,

before me this date October 1, 2003 personally appeared Manoneet Singh who is personally known to me or  proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he/she executed the same in his/her authorized capacity, and that by his/her signature on the instrument the person or the entity upon behalf of which the person acted executed the document.

Notary Stamp/Seal

  
Karen L. Prescott  
Notary Public

